

ADMIXTURES FOR USE IN CONCRETE

The Standard Specifications are revised as follows:

SECTION 912, DELETE LINES 61 THROUGH 264.

SECTION 912, AFTER LINE 265, INSERT AS FOLLOWS:

912.03 Admixtures for Use in Concrete. *Admixtures for use in PCC shall be selected from the Department's list of approved Admixtures for PCC. An admixture may be added to the approved list by completing the requirements in ITM 806., Procedure D. Admixtures containing chloride added as an ingredient of manufacture are unacceptable.*

(a) Air Entraining Admixtures. *Air entraining admixtures are materials to be added to PCC mixtures at the mixer for the purpose of entraining air.*

(b) Chemical Admixtures for Concrete. *Chemical admixtures are materials to be added to PCC mixtures at the mixer for the purpose or purposes indicated below.*

1. Type A. *Type A is a water reducing admixture that reduces the quantity of mixing water required to produce concrete of a given consistency.*

2. Type B. *Type B is a retarding admixture that retards the setting of concrete.*

3. Type C. *Type C is a accelerating admixture that accelerates the setting and early strength development of concrete.*

4. Type D. *Type D is a water reducing and retarding admixture that reduces the quantity of mixing water required to produce concrete of a given consistency and retards the setting of concrete.*

5. Type E. *Type E is a water reducing and accelerating admixture that reduces the quantity of mixing water required to produce concrete of a given consistency and accelerates the setting and early strength development of concrete.*

6. Type F. *Type F is a high range water reducing admixture, HRWR, that reduces the quantity of mixing water required to produce concrete of a given consistency by 12% or greater.*

7. Type G. *Type G is a high range water reducing and retarding admixture, HRWRR, that reduces the quantity of mixing water required to produce concrete of a given consistency by 12% or greater and retards the setting of concrete.*

8. High Range Water Reducing Admixture System. *HRWR admixture system is a combination of admixtures that act as a type F admixture within a concrete mixture. The system consists of chemical admixtures and an air entraining admixture. One of the components shall be a type F admixture. Components shall be in accordance with 912.03 for their respective types.*

9. High Range Water Reducing and Retarding Admixture System. *HRWRR admixture system is a combination of admixtures that act as a type G admixture within a concrete mixture. The system consists of chemical admixtures and an air entraining admixture. One of the components shall be a type F or a type G admixture. One of the components shall retard the setting of the concrete. Components shall be in accordance with 912.03 for their respective types.*

(c) Test Report. *Testing shall be performed by a recognized laboratory in accordance with ITM 806.*

- 1. Air entraining admixtures shall be in accordance with AASHTO M 154.*
 - 2. Chemical admixtures shall be in accordance with AASHTO M 194 for their respective types.*
 - 3. Test reports shall not be more than five years old on January 1 of the approval year. New submittals of test reports more than five years old will be accepted, if all subsequent five year limited retest reports are submitted. Subsequent limited retest results shall comply with the dating and age requirements specified above and shall include the following tests as a minimum requirement for compliance.*
 - a. infrared analysis, residue by oven drying, and specific gravity;*
 - b. water content and time of setting;*
 - c. flexural strength at three, seven, and 28 days;*
 - d. relative durability.*
-